

ance of the more wedge-shaped brachials of a *Holopus*-arm (Pl. III. figs. 10–12), but differ in having the pinnule-socket at the base of the lateral process instead of on its upper edge.

Before the discovery of the support below the radials de Loriol considered *Eudesicrinus* to be a species of *Eugeniocrinus*; and he still regards it as a member of the family Eugeniocrinidæ, to which he has also thought of transferring *Cotylecrinus*, though he has never actually done so. This is partly due to his having been led to regard the calyx-tube of *Holopus* and *Cyathidium* as possibly composed of the five basal pieces only,¹ though there are very serious objections to this view. We know also that the Eugeniocrinidæ, *i.e.*, *Eugeniocrinus*, *Phyllocrinus*, and *Tetracrinus*, have a jointed stem, which is not the case either in *Eudesicrinus* or in *Cotylecrinus*. Both these genera seem to me to find their proper place in the family Holopidæ, which I should characterise as follows—Basals and radials closely united into a more or less tubular calyx of variable depth. It is sessile and attached by a somewhat spreading base, the foundation of which is probably formed by a dorsocentral plate, like that of *Marsupites*. Ten simple arms, composed of a small number of massive joints.

A. Radials high but asymmetrical, exhibiting a difference of bivium and trivium.

α. Radials fused together with basals into a tubular body-chamber lodging the viscera.

A syzygy between the two outer radials, 1. *Holopus*.

β. Visceral mass was probably lodged above the radials, which are mostly found separated from the subjacent basals and the spreading base of attachment.

A muscular joint between the two outer radials, 2. *Eudesicrinus*.

B. Radials apparently all alike. Two or more calyces sometimes associated as if budding.

α. Radials and basals fused into a tubular body-chamber, 3. *Cyathidium*.

β. Radials low, and readily separated from the basals and disk of attachment, 4. *Cotylecrinus*.

The remarkable Jurassic fossil, described by de Loriol as *Gymnocrinus*,² is still too imperfectly known to be placed in this family; but I cannot help suspecting that it is only a portion of the cup of a larger Crinoid. On the other hand, *Micropocrinus gastaldii*, described by Michelin³ from the Miocene of Superga near Turin, seems to be closely allied to *Holopus*. Michelin's diagnosis runs as follows: "Radix expansa, non ramosa, adhaerens, sublævis; corpus breve crassum, rotundatum, subpentagonale, exterius granulosum, interius profundum, irregulariter vacuum; margine revoluto in decem segmentis acutis subdiviso." I am somewhat puzzled as to the identity of the ten marginal segments. I do not think that they can represent the individual muscle-plates, of which there would be ten in a decalcified calyx; nor does it seem likely that *Micropocrinus* is a ten-rayed type like *Promachocrinus* (*ante*, pp. 37, 38). The real nature of this Crinoid must therefore remain undecided for the present.

On the other hand, the Palæozoic *Edriocrinus*, which has been described by Hall

¹ Paléont. Franç., *loc. cit.*, p. 191.

² *Ibid.*, p. 209.

³ Description d'un nouveau genre de la Famille de Crinoides, *Rev. et Mag. Zool.*, ser. 2, t. iii. p. 93.